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ABSTRACT

Based on data collected by the U.S. Bureau of the Census in its October 1980 Current Population Survey, this report examines school enrollment rates of 3- and 4-year-olds from three major ethnic groups (black, white, and Spanish origin) and relates this information to characteristics of the children's schools and households. Variables covered in the document's 10 tables include race or ethnic group, age, geographic region, metropolitan or nonmetropolitan location, family income, educational attainment of the household head and the mother, sex and occupation of the household head, mother's marital and labor force status, number of other children under 14 in the household, the school's educational level and public or private status, and the child's full- or part-time enrollment. Also noted is the impact of the federal Head Start program. Among the findings of the survey are that overall preprimary enrollment rates were roughly the same for whites and blacks but were lower for children of Spanish origin, and that blacks were far more likely than whites to be enrolled in full-day programs and in public schools. Two appendices present definitions of variables and discuss data sources and reliability. (RW)

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School Enrollment of 3- and 4-Year-Olds, by Race/Ethnic Category

October 1980

by

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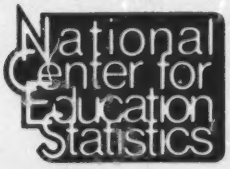

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Highlights

1. The overall preprimary enrollment rates of 3- and 4-year-olds were about the same for whites (36 percent) and blacks (38 percent). However, this seems to be due to several off-setting circumstances as outlined below and discussed in the text. The rate for children of Spanish origin irrespective of race (29 percent) was lower than average.

2. In general, when socioeconomic factors are controlled, the enrollment rates for blacks were higher than those for whites. This held true especially for those factors that indicate lower socioeconomic status, i.e., low income, low school completion level of parent(s), low occupation status of parent(s), etc.

3. Blacks are more likely than whites to be included in the socioeconomic categories where the preprimary enrollment rates are lower, but differences in rates among socioeconomic categories are less pronounced for blacks than for whites.

4. The character of preprimary school education was very different for whites and blacks as measured by length of school day and control of the institution providing the preprimary education. Blacks were much more likely to be in full-day programs than whites (69 percent vs. 28 percent), but whites were much more likely to be in private institutions (69 percent vs. 35 percent).

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School Enrollment of 3- and 4-year-olds, by
Race/Ethnic Category:
October 1980

INTRODUCTION

In recent years, two broad issues have created interest in the school enrollment of 3- and 4-year-olds. The first is the belief of many educators that early schooling is an important factor in the later educational achievement of children, especially for children of low-income families. This philosophy prompted the Federal Head Start program in 1965 for preprimary school-aged children from low-income families. The second issue concerns the increasing number of working mothers of small children. In fall 1980, in families with the mother in the household, almost half of the 3- and 4-year-old children had mothers in the work force.

The purpose of this report is to examine the enrollment rates (the percentage of the population enrolled) of 3- and 4-year-olds from three major race/ethnic groups and their relationship to socioeconomic characteristics of the households from which they come. The three major groups used in this report are white, black, and Spanish origin. The report is based on special tabulations prepared for National Center for Education Statistics (NCES) by the Bureau of the Census from data collected in the October 1980 Current Population Survey.

Most of the socioeconomic statistics highlighted in the text are presented in tables 1 and 2 which consist primarily of percents. Users wanting more detailed counts are referred to the NCES publication Preprimary Enrollment, October 1980. Because of the procedures used by the Census Bureau, the data for "white" and "black" children are mutually exclusive. Children of Spanish origin are also included in the white and black categories, although the vast majority of them are in the former category. It should also be noted that the totals include races other than white or black (about 3 percent of the total) for which details are not shown in tables 1 and 2 because of small sample size. Differences highlighted in the text are statistically significant at the 90 percent confidence level (1.5σ). For details on the source and reliability of data, see Appendix B.

The overall distribution of 3- and 4-year-olds by race/ethnic group and age is shown in table A.

Table A. Distribution of 3- and 4-year olds by age and race/ethnic group: October 1980

Age and race	Number (Thousands)	Percent of total 3- and 4-year olds
3- and 4-year-olds	6,215	100.0
White	5,074	81.6
Black	973	15.7
Other races	168	2.7
(Spanish origin)	(602)	(9.7)
3-year-olds	3,143	50.6
White	2,565	41.3
Black	492	7.9
Other races	86	1.4
(Spanish origin)	(303)	(4.9)
4-year-olds	3,072	49.4
White	2,509	40.4
Black	481	7.7
Other races	82	1.3
(Spanish origin)	(299)	(4.8)

Overall Rates

Almost 37 percent of the population of 3- and 4-year-olds was enrolled in preprimary programs. The rate was 27 percent for 3-year-olds and 46 percent for 4-year-olds. There was virtually no difference between the overall participation rates for whites (36 percent) and blacks (38 percent). However, this seems to be due to several off-setting demographic circumstances as will be shown in the analyses which follow. In general, when socioeconomic factors were controlled, the enrollment rates for blacks were higher than those for whites. However, blacks were more likely than whites to be included in socioeconomic categories where the rates were lower. The rate of 29 percent for children of Spanish origin was lower than average. Overall rates by age and race/ethnic group are shown in table B.

Table B. School enrollment rates of 3- and 4-year-olds by age and race/ethnic group: October 1980

Age and race	Number (thousands)		Percent enrolled
	Total	Enrolled	
3- and 4-year olds	6,215	2,280	36.7
White	5,074	1,843	36.3
Black	973	371	38.1
Other races	168	66	39.3
(Spanish origin)	(602)	(172)	(28.6)
3-year-olds	3,143	857	27.3
White	2,565	697	27.2
Black	492	134	27.2
Other races	86	26	30.2
(Spanish origin)	(303)	(54)	(17.8)
4-year-olds	3,072	1,423	46.3
White	2,509	1,146	45.7
Black	481	237	49.3
Other races	82	40	48.8
(Spanish origin)	(299)	(118)	(39.5)

Level of School

The majority of the 3- and 4-year-olds enrolled in preprimary programs went to nursery schools; the remainder were enrolled in kindergartens. The percent of all those who were enrolled in nursery school, by age and race/ethnic group, is shown in table C.

Table C. Distribution of 3- and 4-year-olds enrolled in school by age, level, and race/ethnic group: October 1980

Age and level	Enrollment (thousands)			
	Total[1]	White	Black	Spanish origin
3- and 4-year-olds	2,280	1,843	371	172
Nursery school	1,889	1,562	276	141
Kindergarten	391	282	95	30
(Percent nursery)	(82.9)	(84.8)	(74.4)	(82.0)
3-year-olds	857	697	134	54
Nursery school	825	676	124	*
Kindergarten	32	21	10	*
(Percent nursery)	(96.3)	(97.0)	(92.5)	*
4-year-olds	1,423	1,146	237	118
Nursery school	1,064	886	152	*
Kindergarten	359	261	85	*
(Percent nursery)	(74.8)	(77.3)	(64.1)	*

[1]Includes other races not shown in detail.
*Data are not shown because of small sample size.

Region

Enrollment rates by region (table 2(a)) varied more for blacks (where the range extended from 32 percent in the South to 52 percent in the West) than for whites (where the range extended from 32 percent in the North Central States to 43 percent in the Northeast). Rates for blacks were higher than those for whites in the North Central States (45 percent vs. 32 percent). The apparent higher enrollment rate for blacks in the West was not statistically significant because blacks made up such a small portion of the population and sample in the region. The fact that a disproportionately high percentage of black 3- and 4-year-olds lived in the South (51 percent vs. 30 percent) where preprimary enrollment rates are lowest tended to lower the national enrollment rates for these children (see table 1(a)). In the other three regions, black enrollment rates were 45 percent compared to only 37 percent for whites.

There were no significant differences among regional rates for children of Spanish origin in the three regions where rates are shown in table 2(a). They were consistently low.

Metropolitan Status

Enrollment rates for 3- and 4-year-olds were considerably higher in metropolitan areas (42 percent in central cities and 43 percent in other metropolitan areas) than in nonmetropolitan areas where only 26 percent of the children were enrolled (table 2(b)). Metropolitan areas generally offer greater free or low cost preprimary enrollment opportunities to young children. There was little difference, by metropolitan status category, between the rates for whites and blacks. However, a higher proportion of whites (36 percent) than blacks (23 percent) lived in nonmetropolitan areas, where there seem to be fewer prekindergarten school facilities (table 1(b)). Rates for children of Spanish origin were consistently lower than the overall rate.

Family Income

Family income was an important determinant of school enrollment for 3- and 4-year-olds. In fall 1980, a child in a family with income of $15,000 or more was much more likely to be in school than a child in a family with income of less than $15,000. The comparable percents were 45 and 28, respectively (table 2(c)). When income is controlled there is virtually no difference between the rates of white children and children of Spanish origin. However, two-thirds of the children of Spanish origin (68 percent) came from families with income under $15,000 compared with only 43 percent for white children (table 1(c)). For blacks, the school enrollment rate for young children in families with incomes of $15,000 or more was about the same as that for whites, but, at 37 percent, the rate for black children in the lower-income families was 12 percentage points higher than that for whites. This is probably explained in good part by two key factors shown in the Bureau of the Census data. First, that low-income black families tend to live in large cities which have more Head Start and other free or low-cost prekindergarten programs. Second, that a disproportionately high percent of black families with income under $15,000 are female-headed.[1]

School Completion of Head of Household

Children 3 and 4 years of age living in households where the head completed high school were much more likely to be in school than those in households where the head failed to complete high school. The rates were 41 percent and 26 percent, respectively (table 2(d)).

Rates for white and Spanish origin children were approximately the same with respect to educational attainment of household head. For these groups, the differentials by school completion status were greater than average. Thus, children in households where the head completed high school were twice

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[1]Latest available data show that well over half (56.7 percent) of the black families with income under $15,000 are female-headed compared with less than one-fourth (23.0 percent) of the low-income white families. See U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 120, Money Income of Families and Persons in the United States: 1979.

as likely to be enrolled in early childhood programs than children whose household head did not complete high school. The rates were 41 and 20 percent for white households and 39 and 21 percent for Spanish origin households. On the other hand, the differences in the rates by school completion were less pronounced for blacks where the comparable rates were 42 percent and 35 percent, respectively.

White heads of households completed high school at a much greater rate than minority heads, the comparable rates were 78 percent for whites, 56 percent for blacks, and 40 percent for heads of Spanish origin (table 1(d)). On a relative basis, this fact tended to raise the overall rate for white children and lower it for minority children.

School Completion of Mother

The statistics relating to the high school completion of the mother are very similar to and follow the general pattern as those for head of household (table 2(e)).

Occupation of Head of Household

For each race/ethnic group, 3- and 4-year-old children from households where the head is a white collar worker were enrolled in preprimary programs at a much greater rate than other children (table 2(f)). When occupation of household head is controlled, the rates for black children were generally higher than those for whites. However, a much smaller proportion of black children came from white collar households, 23 percent vs. 41 percent for white children (table 1(f)).

Labor Force Status of Mother

For each race/ethnic group, 3- and 4-year-olds with mothers in the labor force were more likely to be in school than children of this age group where the mother was not in the labor force. The comparable enrollment rates were 43 percent and 31 percent, respectively (table 2(g)). This is probably indicative of the importance of the school as a day care center as well as an educational institution. The differential was much greater for black children and children of Spanish origin where the differences were on the order of 20 percentage points, than for white children where the difference was only 10 percentage points. Almost half (48 percent) of all the mothers were in the labor force (table 1(g)). Mothers of black children were somewhat more likely to be in the labor force than mothers of white or Spanish origin children. The comparable percents were 54, 47, and 44.

Sex of Head of Household

A man was reported as head in nine-tenths of the white households (88 percent), three-fourths of the Spanish origin households (75 percent), but in only about half the black households (52 percent) (table 1(h)). In white households, sex of head was not a factor affecting the proportion of 3- and 4-year-olds enrolled in school, but for black households, the enrollment rate was higher in female-headed households (43 percent vs. 36 percent in male-headed households) (table 2(h)).

Marital Status of Mother

The data on Marital Status of Mother (tables 1(i) and 2(i)) follow the same general pattern as those for Sex of Head of Household with the data for "married spouse present" paralleling those for "male" head of household and data for "other" equivalent to "female" head of household.

Number of Other Children Under Age 14 in Household

The number of other children in the household affected the enrollment of 3- and 4-year-olds (table 2 (i)). The enrollment rate in households with no other children is consistently higher for all race/ethnic groups than in households with one or more other children under 14 years old.

For white children and children of Spanish origin, the rate decreased consistently as the number of other children in the home increased. For blacks, there seemed to be no significant differences among the three categories covering one or more other children.

Public vs. Private School Enrollment

Among the three groups analyzed, blacks were most likely and whites least likely to be enrolled in public rather than private early childhood schools. For 3- and 4-year-olds as a group, the percentage of enrollees attending a public institution was 65 percent for blacks, 55 percent for Spanish origin children, and 31 percent for whites. Data for whites and Spanish origin children showed the expected pattern of a higher public proportion for 4-year-olds, of whom a greater proportion attended kindergartens, than for 3-year-olds. But for black youngsters, the proportion is the same for both ages.

The distribution of 3- and 4-year-olds enrolled in school by public vs. private control is shown in table D.

Impact of Head Start

Head Start is a federally supported program initiated in 1965, designed to provide free preprimary education to children from low-income families. Data provided by the Department of Health and Human Services (HHS)[2] indicate that in FY 1980-81, 362,000 children were enrolled in full-time Head Start programs. Of this total, 80 percent or 290,000 were 3 or 4 years of age, indicating that approximately 13 percent of all 3- and 4-year-olds enrolled in school were in Head Start. HHS figures by race/ethnic group were adjusted to make them comparable to the Census figures used in this report. The adjustment assumed that the Head Start category of "Hispanics" was equivalent to the Census category of "Spanish origin," and that "Hispanics" were 90 percent white and 10 percent black.[3] Using these estimates, the

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[2] U.S. Department of Health and Human Services, Administration for Children, Youth, and Families, Office of Human Development Services, Project Head Start Statistical Fact Sheet, May 1981.

[3] These are rough estimates based on expert opinion. Actual data are not available. However, deviations of 5 percentage points will not materially change the findings.

following represents the proportion of Head Start Enrollment of total 3- and 4-year-old enrollment by race/ethnic group:

Total	13 percent
White	8 percent
Black	34 percent
(Spanish origin	30 percent)

Table D. Distribution of 3- and 4-year-olds enrolled in school by age, control and race/ethnic group: October 1980

	Enrollment (thousands)			
	Total[1]	White	Black	Spanish origin
3- and 4-year-olds	2,280	1,843	371	172
Public	839	573	241	95
Private	1,442	1,271	131	76
(Percent public)	(36.8)	(31.1)	(65.0)	(55.2)
3-year-olds	857	697	134	54
Public	237	144	86	*
Private	621	553	49	*
(Percent public)	(27.7)	(20.7)	(64.2)	*
4-year-olds	1,423	1,146	237	118
Public	602	429	155	*
Private	821	718	82	*
(Percent public)	(42.3)	(37.4)	(65.4)	*

NOTE: Details may not add to total because of rounding.

[1]Includes other races not shown in detail.
*Data are not shown because of small sample size.

All Day vs. Part of Day Enrollment

Only about a third of all enrolled 3- and 4-year-old children attended school for a full day. This statistic varied considerably by race/ethnic group with about one-fourth of the white children, one-half of the Spanish origin children, and two-thirds of the black children going to school all day. These percents seemed to apply to white and black children at both ages. The higher proportion of the minority children enrolled in all-day programs could perhaps be due to their greater need for day-care as well as instructional services. The complete distribution is shown in table E.

Table E. Distribution of 3- and 4-year-olds enrolled in school by age, all-day vs. part-of-day enrollment, and race/ethnic group: October 1980

	Enrollment (thousands)			
	Total[1]	White	Black	Spanish origin
3- and 4-year-olds	2,280	1,843	371	172
All-day	788	511	255	85
Part-of-day	1,492	1,332	116	87
(Percent all day)	(34.6)	(27.7)	(68.7)	(49.4)
3-year-olds	857	697	134	54
All-day	321	220	90	*
Part-of-day	536	477	44	*
(Percent all day)	(37.5)	(31.6)	(67.2)	*
4-year-olds	1,423	1,146	237	118
All-day	467	291	165	*
Part-of-day	956	855	72	*
(Percent all day)	(32.8)	(25.4)	(69.6)	*

NOTE: Details may not add to total because of rounding.

[1]Includes other races not shown in detail.
*Data are not shown because of small sample size.

Summary

1. The national school enrollment rates of 3- and 4-year-olds was very similar for whites and blacks, due to a series of off-setting circumstances. In general, when socioeconomic factors are controlled,the enrollment rates for blacks were higher than those for whites. However, blacks were more likely than whites to be included in socioeconomic categories where the rates were lower. When analyzed by socioeconomic characteristics the two groups vary considerably. Some important differences in the enrollment rates were:

   a. The rate for blacks was lowest in the region where they were most represented - the South - where 51 percent of all blacks and 30 percent of all whites resided.

   b. White children (36 percent) more than black children (23 percent) lived in nonmetropolitan areas where enrollment rates for 3- and 4-year-olds were lower.

c. White children (57 percent) more so than black children (25 percent) lived in households with family incomes of $15,000 or more where the enrollment rates were high. However, the enrollment rates for black children were less affected by family income than those for white children.

d. Proportionately fewer black youngsters (approximately 56 percent) than white 3- and 4-year-olds (about 78 percent) lived in households where the head completed high school - a condition positively correlated with school enrollment. On the other hand, black youngsters were less affected by the education attainment of the household head.

e. Similarly, proportionately fewer black than white children lived in "white collar" households which were more associated with school enrollment than the other occupational categories. However, here again black youngsters were less affected by the household head's occupational status than the white children.

f. White children 3 and 4 years old living in households with three or more other children had considerably lower school enrollment rates than children from smaller households. For black children, size of household had little influence on the school enrollment rate.

g. Black 3- and 4-year-olds attending school were much more likely to be in a public institution (65 percent vs. 31 percent for whites).

h. It is estimated that of the 3- and 4-year-olds enrolled in school, one out of three black children compared with only one out of ten white youngsters, were participating in a Head Start program.

i. Two-thirds of the black enrollees but only one-fourth of the whites were in school for the full day.

2. School enrollment rates for 3- and 4-year-olds of Spanish origin were consistently lower than those for whites and blacks. Two exceptions were noted:

   a. Spanish origin youngsters from families with income of $15,000 or more were enrolled in school at about the same rate as non-Hispanic children from families of that income level.
   b. Spanish origin 3- and 4-year-olds from households in which the head completed high school were enrolled in school at about the same rate as non-Hispanic children from similar households. The same held true for Spanish origin children from households in which the mother completed high school.

Table 1. Percent distribution of 3- and 4-year-olds by race/ethnic group, for selected characteristics: October 1980

Characteristics	Total[1]	White	Black	Spanish origin
(a) Region				
Total children (thousands)	6,215	5,074	973	602
Total percent	100.0	100.0	100.0	100.0
Northeast	19.6	20.5	17.2	21.8
North Central	27.1	28.1	23.3	7.0
South	32.8	29.7	51.2	28.2
West	20.5	21.7	8.3	43.0
(b) Metropolitan status				
Total children (thousands)	6,215	5,074	973	602
Total percent	100.0	100.0	100.0	100.0
Metropolitan, central	28.6	22.6	58.4	54.5
Metropolitan, other	37.4	41.1	18.9	29.2
Nonmetropolitan	34.0	36.3	22.7	16.3
(c) Family income				
Children in households reporting income (thousands)	5,960	4,864	943	564
Total percent	100.0	100.0	100.0	100.0
Under $15,000	48.1	42.7	75.5	68.4
$15,000 or more	51.9	57.3	24.5	31.6
(d) School completion of head of household				
Children in families with head of household (thousands)	6,031	4,937	943	589
Total percent	100.0	100.0	100.0	100.0
Did not complete high school	25.3	21.7	44.1	60.0
Completed high school	74.7	78.3	55.9	40.0
(e) School completion of mother				
Children in families with mother in household (thousands)	5,994	4,912	918	585
Total percent	100.0	100.0	100.0	100.0
Did not complete high school	24.6	21.3	42.1	60.2
Completed high school	75.4	78.7	57.9	39.8

Table 1. Percent distribution of 3- and 4-year-olds by race/ethnic group, for selected characteristics: October 1980 (continued)

Characteristics	Total[1]	White	Black	Spanish origin
(f) Occupation of head of household				
Children in households with head in labor force (thousands)	5,308	4,540	643	456
Total percent	100.0	100.0	100.0	100.0
White collar	39.5	41.4	23.0	22.4
Blue collar	44.6	44.5	48.3	53.3
Other occupation	10.0	9.4	14.2	16.2
Unemployed	5.9	4.7	14.5	8.1
(g) Labor force status of mother				
Children in families with mothers in household (thousands)	5,994	4,912	918	585
Total percent	100.0	100.0	100.0	100.0
In labor force	48.4	47.0	54.4	43.6
Not in labor force	51.6	53.0	45.6	56.4
(h) Sex of head of household				
Children in families with head of household (thousands)	6,031	4,937	943	589
Total percent	100.0	100.0	100.0	100.0
Male	82.8	88.3	51.6	75.0
Female	17.2	11.7	48.4	25.0
(i) Marital status of mother				
Children in families with mother in household (thousands)	5,994	4,912	919	586
Total percent	100.0	100.0	100.0	100.0
Married, spouse present	82.7	88.2	52.0	74.9
Other	17.3	11.8	48.0	25.1
(j) Number of other children under age 14 in household				
Total children (thousands)	6,215	5,074	973	602
Total percent	100.0	100.0	100.0	100.0
None	40.1	41.6	33.7	35.8
One	36.7	37.4	31.6	33.3
Two	15.7	14.8	20.8	18.1
Three or more	7.5	6.2	13.9	12.8

[1]Includes other races not shown in detail.

Table 2. School enrollment rates of 3- and 4-year-olds by race/ethnic group, for selected characteristics: October 1980

Characteristics	Total[1]	White	Black	Spanish origin
(a) Region				
Total children	36.7	36.3	38.1	28.6
Northeast	42.8	42.8	41.9	27.5
North Central	34.3	32.3	44.9	*
South	33.3	34.2	31.5	27.1
West	39.4	38.4	51.9	27.4
(b) Metropolitan status				
Total children	36.7	36.3	38.1	28.6
Metropolitan, central	41.6	41.7	41.5	33.5
Metropolitan, other	42.5	42.3	45.7	24.4
Nonmetropolitan	26.3	26.3	23.5	18.4
(c) Family income				
Total children in households reporting income	36.7	36.5	38.2	28.9
Under $15,000	27.7	24.8	36.5	23.1
$15,000 or more	45.1	45.2	42.4	41.0
(d) School completion of head of household				
Total children in families with head of household	36.9	36.3	38.9	28.0
Did not complete high school	25.6	21.8	34.6	20.7
Completed high school	40.7	40.4	42.3	38.7
(e) School completion of mother				
Total children in families with mother in household	37.0	36.5	39.2	28.2
Did not complete high school	23.6	20.2	32.4	19.0
Completed high school	41.4	40.9	44.4	41.3

Table 2. School enrollment rates of 3- and 4-year-olds by race/ethnic group, for selected characteristics: October 1980 (continued)

Characteristics	Total[1]	White	Black	Spanish origin
(f) Occupation of head of household				
Total children in households with head in labor force	37.0	37.0	41.7	28.3
White collar	51.9	52.0	57.4	43.1
Blue collar	28.2	26.7	35.4	25.9
Other occupation	30.6	28.7	36.3	*
Unemployed	28.8	22.2	43.0	*
(g) Labor force status of mother				
Total children in families with mothers in household	37.0	36.5	39.3	28.0
In labor force	43.2	41.9	48.9	39.6
Not in labor force	31.3	31.8	27.9	19.1
(h) Sex of head of household				
Total children in families with head of household	36.9	36.3	38.9	28.0
Male	36.3	36.2	35.5	26.0
Female	39.8	37.7	43.2	33.1
(i) Marital status of mother				
Total children in families with mother in household	37.0	36.5	39.2	28.2
Married, spouse present	36.4	36.4	36.1	26.7
Other	39.8	37.7	43.1	32.7
(j) Number of other children under age 14 in household				
Total children	36.7	36.3	38.1	28.6
None	40.1	39.7	42.6	35.8
One	36.5	36.5	36.2	32.0
Two	34.1	33.4	36.6	21.1
Three or more	24.6	19.9	34.8	10.4

[1]Includes other races not shown in detail.
*Because of the large standard errors involved, percents are not shown where the base is less than 75,000.

Population Coverage. The data presented in this report relate to the civilian noninstitutional population in the 50 States and the District of Columbia.

Nursery School. A nursery school is defined as a group or class that is organized to provide education experiences for children during the year or years preceding kindergarten. It includes instruction as an important and integral phase of its program of child care. Private homes in which essentially custodial care is provided are not considered nursery schools.

Kindergarten. A group or class that is organized to provide education experiences for children for the year immediately preceding the first grade. A kindergarten class may be organized as a grade of an elementary school or as part of a separate kindergarten school.

Age. The age classification is based on the age of the person on his last birthday preceding October 1980.

Race and Ethnicity. In this report the race categories "white" and black" are mutally exclusive but the ethnic category "Spanish origin" is not. Thus children of Spanish origin who may be of any race are also included in the "white" and "black" categories. The total columns of tables 1 and 2 also includes races other than white or black (about 3 percent of the total) for which data are not shown in separate columns.

In 1980 a child's ethnicity was directly reported for the child. Response to a question on origin or descent refer to a child's perceived national or ethnic lineage and does not necessarily indicate the child's or the child's parents' country of birth. The category Spanish origin includes persons of Mexican, Puerto Rican, Central or South American, and other Spanish origin.

Part-day and Full-day Attendance. A child who attended school for less than 2 hours per day was not considered to be enrolled, however, a child attending 1 or 2 days per week was considered enrolled. A child was in nursery school "part-day" if he or she usually attended either in the morning or in the afternoon, but not in both periods. A "full-day" enrollee usually attended both in the morning and afternoon. Kindergarten attendance was" part-day" (1) if the child usually attended either in the morning or afternoon, but not both periods; or (2) if the child attended "full-day" but not every day of the week. A kindergarten child was a "full-day" enrollee if he or she usually attended both in the morning and afternoon each day, for 5 days per week.

Public or Private school. In this report, a public school is defined as any educational institution operated by publicly elected or appointed school officials and supported by public funds. Private schools include educational institutions established and operated by religious groups, as well as those which are under other private control.

Head of Household. The household head is the person designated as such by the respondent for the household, regardless of whether he is related to other household members by blood, marriage, or adoption. Women are not

classified as heads if their husbands are resident members of the family at the time of the survey. Families in which the household head is a member of the Armed Forces and not residing at home are designated by the Census Bureau as having "no household head". In this report, such families and children are excluded from analyses involving household characteristics.

Occupation of Head of Household. Heads of household were considered to work in one of four categories, unless they were unemployed or not in the labor force. The four categories include: (1) "white collar," referring to the combination of the following major groups used in the 1970 census; (a) professional, technical and kindred; (b) managers and administrators, except farm; (c) clerical and kindred workers; and (d) sales workers; (2) "blue collar," referring to the total of the following major groups - (a) craft and kindred workers; (b) operatives, including transport; and (c) laborers, except farm; (3) "farm workers," referring to (a) farmers and farm managers and (b) farm laborers and supervisors; and (4) "service workers," including private household workers and other service workers. In this report the "farm workers" and "service workers" were combined.

Metropolitan/nonmetropolitan Residence. The population residing in standard metropolitan statistical areas (SMSA's) constitutes the metropolitan population. Except in New England, an SMSA is a country or group of contiguous counties which contains at least one city of 50,000 inhabitants or more, or "twin cities" with a combined population of at least 50,000. In addition to the county, or counties, containing such a city or cities, contiguous counties are included in an SMSA if, according to certain criteria, they are essentially metropolitan in character and are socially and economically integrated with the central city. In New England, SMSA's consist of towns and cities, rather than counties. The metropolitan population in this report is based on SMSA's as defined in the 1970 census and does not include any subsequent additions or changes.

Geographic Regions. The four major regions of the United States, as defined by the Census Bureau, consist of the following State groups:

Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

North Central: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

Family Income. Income as defined in this report represents the combined total money income of the family before deductions for personal taxes, Social Security, bonds, etc. It is the algebraic sum of money wages and salaries, net income from self-employment, and income other than earnings received by all family members during the 12 months prior to the survey.

Appendix B--Source and Reliability of the Estimates

The estimates in the tables are based on data collected in October 1980 from the Current Population Survey of the Bureau of the Census. This survey covers a sample spread over 629 areas, comprising 1,133 counties, independent cities, and minor civil divisions, with coverage in each of the 50 States and the District of Columbia. The sample is composed of approximately 66,000 occupied households that are eligible for interview each month. Of this number, 2,500 occupied units were visited, but interviews were not obtained because the occupants were not found at home after repeated calls or were unavailable for some other reason.

The estimation procedure used in this survey involves the inflation of weighted sample results to independent estimates of the civilian noninstitutional population of the United States by age, race, and sex. Since the estimates are based on a sample, they may differ from the figures that would have been obtained from a completed census. There are two types of errors possible in an estimate based on a sample survey--sampling and nonsampling. Tables of standard errors are provided below to indicate the magnitude of the sampling error. The magnitude of the nonsampling error is unknown. However, nonsampling error was kept to a minimum by methods built into the survey procedure. Consequently, care should be exercised in the interpretation of figures based on a relatively small number of cases or on small differences between estimates.

Sampling Variability

"Standard errors" can be approximated by information given in tables B-1, B-2, and B-3. The sample estimate and its estimated standard error enable the reader to construct interval estimates that include the average result of all possible samples with a known probability. For example, if all possible samples were selected, with each surveyed under identical conditions, and an estimate and its estimated standard error were calculated for each sample, then: (1) approximately 68 percent of the intervals from one standard error below the estimate to one standard error above the estimate would include the average result of all possible samples; and (2) approximately 95 percent of the intervals from two standard errors below the estimate to two standard errors above the estimate would include the average result of all possible samples.

Standard Error Tables and Their Use. In order to derive standard errors that would be applicable to a large number of estimates and could be prepared at a moderate cost, a number of approximations were required. Therefore, instead of providing an individual standard error for each estimate, generalized sets of standard errors are provided for various sizes of estimated numbers and percentages. These sets of standard errors, along with factors, gives an indication of the order of magnitude of the standard error of an estimate rather than the precise standard errors.

The figures presented in tables B-1 and B-2 are approximations of generalized standard errors for estimated numbers and estimated percentages. Estimated standard errors for specific characteristics cannot be obtained from tables B-1 and B-2 without the use of the factors in tables B-3. These factors must be applied to the generalized standard errors in order to adjust for the combined effect of sample design and estimation procedures on the

value of the characteristics. When an estimate involves two different categories, use the larger of the two factors corresponding to those categories. Generalized standard errors for intermediate values of estimates not shown in tables B-1 and B-2 may be approximated by interpolation.

In this analysis most of the estimates are percents; therefore, table B-2 (used in conjunction with table B-3) will be particularly useful. To obtain estimates of the standard errors of the enrollment rates shown in table 2, the user must obtain the base of the estimated percent from table 1 by multiplying the percent in the corresponding cell by the total number of children in that category.

Because of the large standard errors involved, percents are not shown where the base is less than 75,000. Differences highlighted in the text are significant at the 90 percent confidence level (1.5σ).

Illustration of the Use of Tables of Standard Errors

Table 2d shows that the estimated enrollment rate for white 3- and 4-year-olds from households in which the head did not complete high school was 21.8 percent. The base of the percentage is computed from table 1(d), as follows: 4,937 x .217 = 1,071 (thousand). Interpolating from table B-2 we arrive at a figure of 1.7 percent. From table B-3 we obtain a factor of 1.0 for white children by years of school completed by family head. Therefore, the estimated standard error is 1.7 x 1.0 = 1.7 percent. The 68 percent confidence interval is from 20.1 to 23.5 percent. Therefore, a conclusion that the average estimate derived from all possible samples lies within this range would be correct for roughly 68 percent of all possible samples. Similarly, we could conclude with 90 percent confidence (1.5σ) that the average estimate from all possible samples lies within the interval of 19.2 to 24.4 percent and with 95 percent confidence (2σ) that the range was from 184 to 25.2.

Illustration of the Calculation of the Standard Error of the Difference Between Two Percentages

A rough estimate of the difference between two percents is attained by multiplying the larger of the two standard errors by 1.4*.

As shown above, the estimated enrollment rate of white 3- and 4-year-olds from households where the head did not complete high school was 21.8 percent (with an estimated standard error of 1.7 percent). The comparable enrollment percent for black youngsters was 34.6 percent. Therefore, the difference between blacks and whites was 12.8 percentage points. The base of the black percentage is calculated from Table 1 and follows:

$$943 \times .441 = 416$$

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* Source: Standards for Discussion and Presentation of Errors in Survey and Census Data, Journal of the American Statistical Association, September 1975, Vol. 70, No. 351, Pt. II.

Interpolating from Table B-2, we estimate the value for blacks to be 3.2 percent and since the factor in table B-3 is 1.0 the standard error is 3.2 percent, larger than that of 1.7 for whites. Multiplying 3.2 by 1.4, we arrive at an approximate standard error difference of 6.8 percent. Since 6.8 is less than the 12.8 differences in percentages we may assume that the difference was significant at the 90 percent confidence level.

Table B-1. Standard errors of estimated numbers
(numbers in thousands)

Size of estimate	Standard error	Size of estimate	Standard error
50	9	2,500	59
100	13	5,000	72
250	21	7,500	71
500	29	9,000	65

Table B-2. Standard errors of estimated percentage[1]

Estimated percentage	Base of estimated percentage (thousands)									
	100	250	500	750	1,000	1,500	2,500	5,000	7,500	9,000
2 or 98	1.8	1.2	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.2
5 or 95	2.9	1.8	1.3	1.0	0.9	0.7	0.6	0.4	0.3	0.3
10 or 90	4.0	2.5	1.8	1.4	1.3	1.0	0.8	0.6	0.5	0.4
20 or 80	5.3	3.3	2.4	1.9	1.7	1.4	1.1	0.7	0.6	0.6
35 or 65	6.3	4.0	2.8	2.3	2.0	1.6	1.3	0.9	0.7	0.7
50	6.6	4.2	2.9	2.4	2.1	1.7	1.3	0.9	0.8	0.7

[1]Caution should be used in comparing percentages computed on a base less than 75,000. As the standard errors on these percentages are relatively large there is little chance that such comparisons would reveal useful information.

Table B-3. "f" Factors to be applied to tables B-1 and B-2 to approximate standard errors

Type of characteristic	Value of "f"
Kindergarten and nursery school enrollment	
Total, white or black children	1.0
Spanish children	1.5
Labor force status of mother or family head	
Total, white or black children	1.1
Spanish children	1.3
Mother or family head unemployed	
Total, white or black children	1.1
Spanish children	1.3
Years of school completed by mother	
Total or white children	1.1
Black children	1.3
Spanish children	1.5
Years of school completed by family head	
Total, white or black children	1.0
Spanish children	1.5
Children tabulated by family income	
Total or white children	1.5
Black children	1.6
Spanish children	2.4
Marital status of the mother	
Total, white or black children	1.0
Spanish children	1.5

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